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COMMENTARY (INVITED)

Commentary on: Mendelson T & Eaton WW. Recent advances in the prevention of mental disorders. SPPE (2018)

P. B. Jones[1]

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Medicine of the mind, a highly interdisciplinary activity now known as psychiatry, was born in asylums concerned with the later stages of severe conditions that continue to shape even our most recent diagnostic classifications. Schizophrenia is the prototypical example. Despite this heritage, evidence-based approaches from clinical mental health sciences have alerted us to the potential benefits of early interventions to prevent such outcomes, while epidemiology has shown that less severe but common illnesses such as depression and anxiety are highly comorbid states that wax and wane in the population. Life course models now encompass developmental origins of health and disorder, and modern, multilevel concepts of causation offer the possibility of decisive preventative action. What does the evidence tell us about prevention of mental disorders?

The review by Mendelson and Eaton [7] in this edition of SPPE is timely and highly informative. Taking depression, anxiety and schizophrenia as examples they examine the evidence-base for preventative interventions, encompassing efficacy in the universal, selective and indicated contexts, through to the real-world concerns of cost-effectiveness. It turns out that there is already rather a lot of high-quality, randomised controlled trial evidence on the prevention of mental disorders, and many of these are already summarised by a number of strong, systematic reviews; but these reviews overlap in scope, leave gaps, and will inevitably have their own methodological foibles. The authors tackle the paradoxical question that arises from such an abundance of preprocessed evidence: how best to review the reviews?

Reviews of reviews, also known as umbrella reviews or meta-reviews, will surely become increasingly common in health science journals; they provide researchers and decision-makers with a concise description and a clear understanding of a broad area such as the prevention of mental disorders. Rigorous methodology is as important as it is for the systematic reviews on which umbrella reviews, themselves, are based and, like systematic reviews, technological developments have been rapid. This methodological thinking has been translated into guidelines and standards [1, 10], and the pros and cons of such meta-reviews are beginning to be appreciated [2, 5]. Originally conceived for synthesised evidence from randomised controlled treatment trials, they are being applied to complex interventions [8] and to observational studies [1, 9]. Mendelson and Eaton have thoughtfully deployed this new synthetic approach to evidence about the prevention of mental disorders in higher-income countries.

Prevention of common disorders in children is a good place to begin given their tractable school and family environments where universal and selective interventions are feasible. The evidence is encouraging, as it appears to be for adults, albeit that for perinatal women the picture is less clear. Most programmes targeting anxiety disorders focus on children, unsurprising given their striking prevalence in the first two decades of life. One school-based universal intervention, the FRIENDS curriculum, holds particular promise with encouraging results in the longer term [3]. As the review unfolds one appreciates the authors' comment that the benefits of modest prevention in early life may cascade over the life course, and that even small preventative effects may be magnified in terms of population impact for highly prevalent disorders. Given the comorbidity between depression and anxiety more research effort should cross these disorders where a preventative effect for one is highly likely to cross over into the other.

The early intervention paradigm has revolutionised the clinical approach to schizophrenia, and there is much evidence concerning its prevention. However, there are points of definition and language that need clear thinking. Like many mental disorders, including depression and anxiety but

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✉ P. B. Jones
pbj21@cam.ac.uk

[1] University of Cambridge, Cambridge, UK

particularly psychosis, the mental states that immediately predate someone meeting operational diagnostic criteria (the high-risk state) usually include individual components of the syndrome. These may be at lower levels of severity or causing less distress than are deemed necessary for a diagnosis, or requiring that one or two additional criteria be met. This means that concepts such as screening are inappropriate and prevention is a term that should be used only with careful definition. Preventing a transition to schizophrenia in someone with an ultra-high-risk mental state may not be blocking some kind of metamorphosis or catastrophic event akin to plaque rupture before myocardial infarction; rather it can be about a one-point change on a clinical rating scale or a clinical decision to rate an item up or down. Prevention in such a context could be seen as secondary or tertiary, or indicated (in different classifications); with some approaches such as using antipsychotic medication, the broader personal harms may outweigh even a measurable benefit in terms of mental state. It is helpful that this field has begun to conceptualise itself within a staged treatment model applicable to a range of over lapping (or trans-diagnostic) clinical phenomena [6].

Universal or selective interventions to prevent schizophrenia, essentially by nurturing the developing brain during foetal and early childhood, highlight the point that with such efforts, even if no cases of schizophrenia are prevented, these approaches are likely to have widespread health, educational and societal gains beyond their original intention; indeed, many such universal interventions considered by Mendelson & Eaton are likely to be initiated for other reasons, focusing on the prevention of more common and more proximal health outcomes; prevention of schizophrenia may be an additional, perhaps unintended benefit. Through another lens, one might see the available evidence as highlighting the usually unmeasured mental health gains of a wide range of public health endeavours aimed at prevention in physical health domains such as metabolic and cardiovascular diseases or cancer. With increasing understanding of common causes between these conditions and mental ill health, it is highly likely that their prevention programmes have important effects on mental health. It is important that the relevant measures become routinely included in public health research, whatever its primary focus. This goes beyond the principle of parity of esteem; there may be clear and important gains to be had for mental health.

If simple preventative actions at the population level have efficacy across the mental and physical divide, their health economic case is likely to be overwhelming. Mendelson and Eaton examine the evidence-base specific to those interventions aimed at mental disorders and find it promising but not yet clear, due in part to methodological challenges and shortcomings in what is an emerging field. Their consideration of emerging fields such as internet-based interventions (and surely we need to think about preventing the deleterious effects of intrusive social media), mindfulness and occupational settings suggest intriguing possibilities. Some larger, individual trials are accruing (e.g. [4]) but, as yet, these are beyond the scope of umbrella reviews.

Prevention of mental disorders has an evolving evidence base that requires action. Policy-makers and other decision-makers should listen to the call to arms regarding school-based interventions for anxiety in children and other moves that can prevent depression. In schizophrenia, the field needs to align with efforts to maximise child health and think deeply about more clinical mental health and behavioural interventions in the second and third decades. Researchers must collaborate in designing bold, innovative prevention trials to be supported by their newly enlightened policy colleagues. All should heed the power of umbrella reviews, stop narrow thinking in physical versus mental silos, and take a more holistic, trans-diagnostic preventative view.

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